



Figure 1: Map of Orleigh Court with locations of Trial Pits

The RGS have a deep affection for Devon and we have made many visits to Dartmoor, Exmoor and the north and south coasts. In the late '90s we had a project to explore the Sticklepath Fault, which runs from Torquay to the north coast near to Bideford. This was to be a different sort of visit – instead of observers listening to a leader, we would be the investigators, a move from being lead, to leading ourselves. A number of delightful visits took place, usually combined with trips to other geological sites.

At the northern end of the Fault, about 3 miles south of Bideford, the Fault passes close to Orleigh Court, a medieval house set on a small hill. The hill is in Carboniferous sandstone which outcrops all around the hill and is exposed locally with the Fault cutting through it in several places. This hill has a cap of flint

gravel, up to 6m thick and extending about 200 m in each direction. The soil is the typical red sandy soil of Devon. The nearest exposure of flints is at Haldon Hill, 60km to the SE (assuming that there are none in the Bristol Channel, which may be a possibility) so two studies offered themselves – to understand the structure at Orleigh and to consider how the flints may have arrived there.

With the blessing of the farmer (Mr, appropriately named, Beer) and the Residents Committee at the Court we made many visits to the site, walked the fields, dug trial pits with spades, hand augered to 1.8m – Chris Fone's speciality – and eventually had an excavator which allowed us to sample to 3.5m – not bad for the RGS! Five pits were dug, very approximately in a ring 100m from the centre of the Court, with exciting results.

Pit 1 showed flints in the soil to 10cm, then white, grey and lilac clays to the bottom of the pit.

Pit 2 exposed yellow/brown soils with flints, then yellow sand to 3.5 m

Pit 3 showed brown topsoil to 1 m, then yellow clay with flints, then red and grey clays to 2.6m

Pit 4 showed topsoil without flints, then yellow sand, clay and large sandstone blocks.



Figure 2: Trial Pit #1 Left to Right: Mr Beer, John Hurst, Ailsa Davies, David Ward, David Riley & Caroline



Figure 3 (above): 1.5m trial pit by garage – shows flints in red, becoming purple with depth, clays

Pit 5 showed mottled red and grey clay, purple sandy clay, a band of flints in red clay, then grey clay to 2.15m.

These sands and clays are very similar to the Oligocene ball clays seen at Bovey.

Petrockstow areas have been worked for ball clays, but not the Dutson so perhaps, as Prof John Cope has suggested, Orleigh Court could be a fourth member basin, albeit a small one.

Mr Beer said he had never seen purple and lilac clays, nor yellow sands in his fields before and the distribution of flints only in the soil and upper horizons was a surprise as a BGS geophysical survey had predicted them extending to 30m.

The Sticklepath Fault has associated with it several Oligocene basins – the Bovey and flints to consider. The BGS UK geology map viewer has named the deposit here as "Tower Wood Gravel Member" since our work was undertaken. But we cannot conceive that the flints were surface transported from Haldon, without there being residues along the path. So we also visited a number of sites between Haldon and Orleigh, including Riverton, Coleford, Cadham Farm, Beckamore Bridge and Upton Deer Farm where a local soil scientist had reported flints, but only Coleford had more than a very minor quantity. As ever, the hand of Man transporting materials can confuse and was probably the explanation for this scatter.

There are major faults in the Bristol Channel which may bring the Upper Cretaceous to the surface such that Orleigh would only be about 10km from this potential source.

I favour the development of a graben on the fault, with Haldon flints captured here while the whole of the SW peninsular is swept clear, followed with the reversion of the graben to give a horst, bringing the flints back to the surface – but that's imagination running away with itself.

Answers on a postage card to the local landowner, King Arthur, c/o Tintagel Castle.

When we were considering looking at Orleigh Court, Roland Goldring, long time friend of the RGS and our president at one stage, encouraged us – as a youth, he and his brother had had holidays in the area and had augered to 14 feet at the Court, discovering lilac clays. Roland planned to join us on the first expedition, but sadly died immediately before the visit.

A great many RGS members helped and I hope, enjoyed these visits, although I can recollect struggling with surveying staffs in pouring rain and digging holes in flint beds, this was the RGS at its best.

Compensation by way of visits to Morte Point, Hartland Quay and Westward Ho! pints of Doom Bar and great evening dinners overcome the challenges of the day and are remembered with great pleasure, by me.

Thanks, Chaps!

Figure 4 (below): Trial Pit 2 – yellow and brown sands to 3.5m

